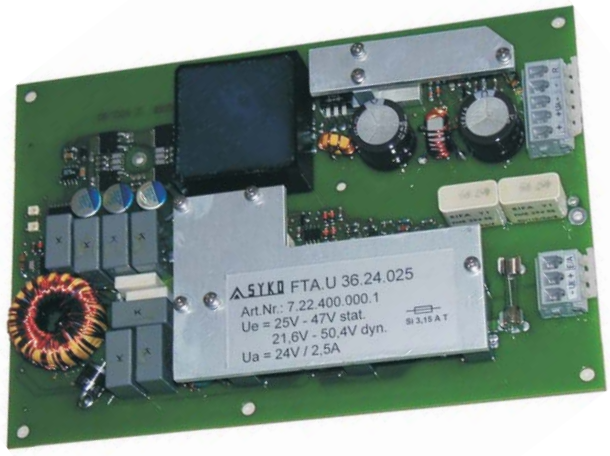
- **Extreme potential isolation**
  15 mm air/creepage distance
  Isolation test voltage 5,5 kV AC
  Specified partial discharge voltage
- **Over voltage protection (Thyristor)**
- **Input noise suppression EN 55022.B**
- **Input / output spike filter C-L²-C**
- **Wide input voltage range**
- **Shock/vibration acc. to EN 50155**
- **Chassis mounting**
- **Temparature monitoring**

for Railway, Special technology, Industrial applications



Series FTA.U (single output)
FTA.B (double output)

Main points:

Output:

- Regulation Σ (U_{in}+I_{out}+T_U)<±3%
- Accuracy absolute ± 2%
- No-load, over load, short circuit proof
- Constant current limitation up to 0V
- Ripple over T_U constant
  I_o>100mA <20 mV_{pp}
  I_o<100mA <100 mV_{pp}
- Output spike filter (C - L^2 - C)
- Spikes <150 mV_{pp} (T 1:1/50MHz)
- Response time ΔI=50% ≤ 2 ms
- Reset 0,9 U_{out} (Open Collector)
- Tracking double output ±3% U_{Nom}
  Regelung over ±U_A ±1,5% f(Uin/Iout/TU)
- LED for Uout = OK

Input:

- Stand-by power approx. 3,5 Watt
- On-Off-application (inhibit)
- On-Off switch hysteresis at under voltage and delayed restart
- Low input capacity
- Input filter acc. to EN 55022.B
- Disturbances Railway standard
  Burst EN 61000-4-4 level 3
  Surge EN 61000-4-5 / 1,8kV / 42Ω
- Rev. polarity protection (fuse-square diode)
- Input fuse 5 x 20mm
- LED for Uin = OK

In general:

- LED for over temperature converter inactiv
- No control loop re-feeging over isolation clearance
- Wago spring clamps
- Regenerator + push-pull concept
- Parallel operation (application)
- Clock frequency approx. 80 kHz
- Isolation test voltage 5,5 KV_{AC} 1 min
- Partial discharge voltage: >2,1kV
- Ambient temperature -25°C / +70°C
  Option: -40°C / +85°C Derating
- Normal convection
- MTBF on request
- Shock/vibration acc. to EN 50155
- Weight approx. 500g
- CE-conformity certificate on request

Uin V	Pout W	Uout V	Iout A		Model number
14,4 - 34	**60**	5,1	12		FTA.U 24·05·120
9V dyn.		12	5		FTA.U 24·12·050
Diesel-Kalt-Start		15	4		FTA.U 24·15·040
surge proof		24	2,5		FTA.U 24·24·025
		110	0,55		FTA.U 24·110·55
		±12	± 2,5	1)	FTA.B 24·12·025
		±24	± 1,25	1)	FTA.B 24·24·012
13,5 - 52	**60**	5,1	12		FTA.U 30·05·120
surge proof		12	5		FTA.U 30·12·050
		15	4		FTA.U 30·15·040
		24	2,5		FTA.U 30·24·025
		110	0,55		FTA.U 30·110·55
		±12	± 2,5	1)	FTA.B 30·12·025
		±24	± 1,25	1)	FTA.B 30·24·012
21 - 51	**60**	5,1	12		FTA.U 36·05·120
surge proof		12	5		FTA.U 36·12·050
		15	4		FTA.U 36·15·040
		24	2,5		FTA.U 36·24·025
		110	0,55		FTA.U 36·110·55
		±12	± 2,5	1)	FTA.B 36·12·025
		±24	± 1,25	1)	FTA.B 36·24·012
42 - 154 [2)]	**60**	5,1	12		FTA.U 80·05·120
surge proof		12	5		FTA.U 80·12·050
		15	4		FTA.U 80·15·040
		24	2,5		FTA.U 80·24·025
		110	0,55		FTA.U 80·110·55
[2)] in preparation		±12	± 2,5	1)	FTA.B 80.12.025
		±24	± 1,25	1)	FTA.B 80·24·012

1) double output		on request
Version (H)	-40°C up to +85°C	additional charge
Optional: output voltages: 36V / 60V / ±30V:		on request
Modification costs of possible changes above values:		on request

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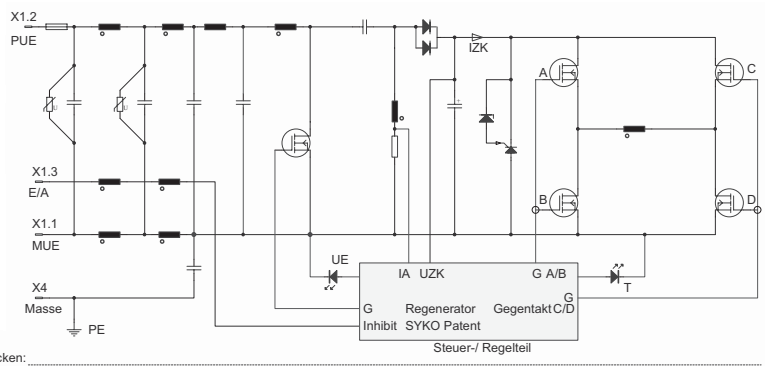
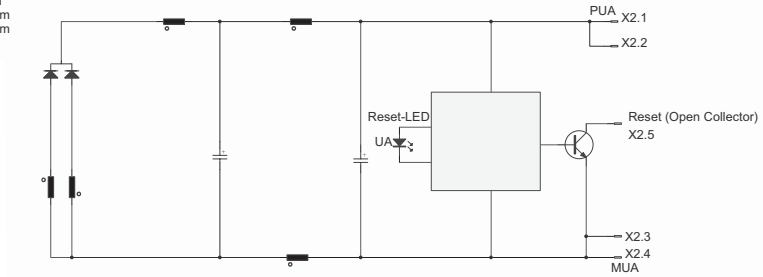
The Regenerator-Patent based ***FTA.U*** series with an output power up to 60 W is developed for mobile applications and high isolation requirements up to >5,5 kV test voltage, air/creepage distances of 15mm and specified partial discharge voltage. The converter's stand-by mode (inhibit-function) requires a current consumption of just typically 3,5 mA, which is ideal for the use in battery networks.



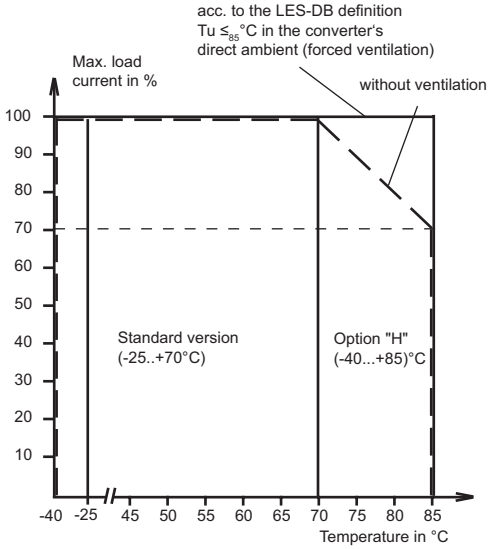
minimale Luft-/Kriechstrecken:
E-A = 15mm
E-PE = 15mm
A-PE = 15mm



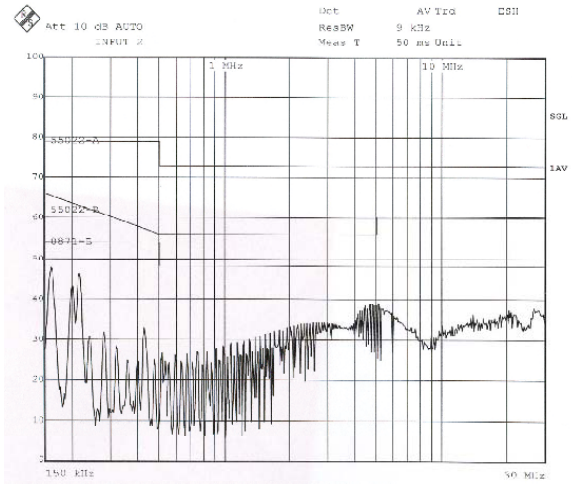
The wide input voltage range allows the use on weak and transient flawed networks. The mechanically stable and ordered build up can be used in mobile applications with high shock/vibration requirements (special vehicles, short distance traffic, railway). The input voltage range down to 9V allows the diesel cold start bridging in 24V on-board networks.

The functionality is secured in the whole operational range up to limit values based on the chosen components, filters, security circuits, dynamical and statically current limitation, temperature monitoring and over voltage protection.

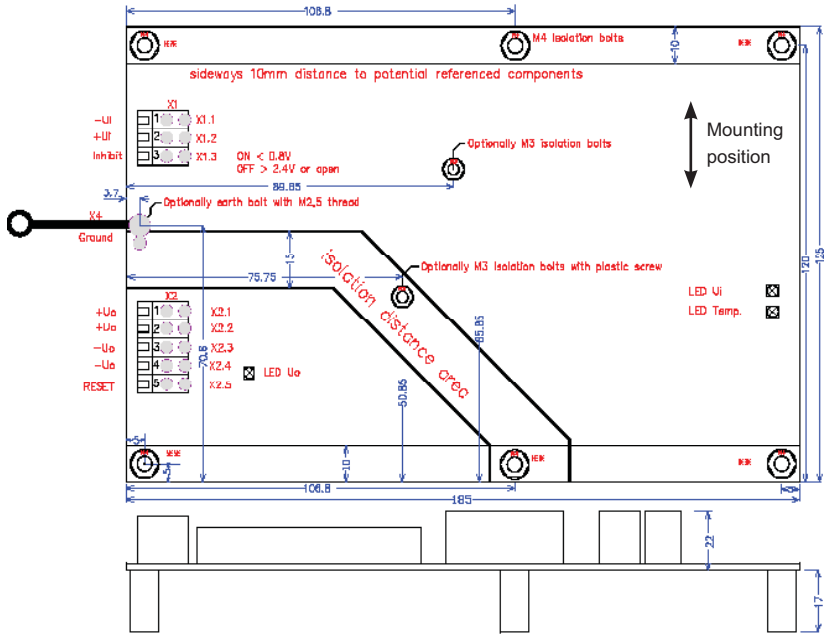
Derating curve



Measurement of radio interference



Mechanics



**M4 distance bolts can have ground potential
necessary distance to other potentials at long side: >5mm
necessary distance to other potentials at short side: >12mm

Efficiency